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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,814	07/29/2003	Richard E. Staerzl	M09692	9028

7590

07/14/2006

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EXAMINER

BELL, BRUCE F

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,814	STAERZL ET AL.	
	Examiner	Art Unit	
	Bruce F. Bell	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,8-12,14,15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,8-12,14,15 and 18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the gelcoat is a coating on the embedded particle polymeric coating or an intermediate coating under the conductive coating, does not reasonably provide enablement for the conductive particles being coated in the gelcoat. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The instant specification as set forth does not provide support for the instant invention as instantly claimed in claims 1 and 18.

Claim Objections

3. Claim 12 is objected to because of the following informalities: ***. Appropriate correction is required.

Claims 12, line 15; After "layer", delete the ".".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 6, 8-12, 14, 15 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Boyd et al (2004/0231975).

Boyd et al discloses an electrode system for preventing bio-fouling of a surface either directly onto the surface of an aquatic vehicle or structure, where the surface can be non-conducting to applied to an insulating paint layer on the surface or can be conducting or is embedded in a layer of electrically non-conducting material. The electrode system includes two alternating sets of electrodes in the form of spaced, parallel strips made from any conductive material. See abstract. The geometry of the sets of electrodes is such that when the voltage is applied, the electric field radiates outwardly parallel to the surface of the structure and allows for the protection of a large surface area with relatively minor changes in the design of the ship hull or other aquatic structures. See paragraph [0007]. The electrodes can be embedded in the outer layer of a gel coat of fiber reinforced plastic or composite or embedded in a polymer matrix of an outer layer of a ship, vessel or any aquatic structure. See paragraph [0008]. The electrodes are in the form of strips, the first set being provided with a number of parallel electrodes, the second set being provided with a number of parallel electrodes, with the positions of the electrodes of the first set alternating with the positions of the electrodes of the second set. See paragraph [0009]. The surface can be electrically non-conductive or can be applied onto an insulating paint layer

on the surface of a ship, vessel or other aquatic vehicle or structure if the surface is electrically conductive. The electrode system comprises alternating first and second sets of electrodes made from any conductive material but is preferably a conductive coating. See paragraph [0021]. The separation between the sets of electrodes allows the field radiating to cover the entire aquatic surface. The electrodes are made from any conductive material, such as UNISHIELD a conductive coating material having a composition of an emulsion polymer binder, which is a blend of a first emulsion containing a conjugated diene monomer or co-monomer and a second emulsion containing an acrylic polymer. The composition also contains an effective amount of electrically conductive particles dispersed in the binder and water as a carrier. The electrically conductive particles include a combination of graphite particles such as a natural flake graphite and the metal containing particles of silver or nickel. See paragraph [0025]. The second emulsion of the polymer binder is selected from acrylic, aliphatic or aromatic polyurethane, polyester urethane, polyester, epoxy, polyamide, polyimide, vinyl, modified acrylic, fluoro-polymer and silicone polymer or a combination thereof. The metal containing particles are either silver or nickel containing particles but other metals may be used such as gold, platinum, copper, aluminum, iron or iron compounds and palladium. The metal containing particles are metal coated ceramic micro spheres or metal coated ceramic fibers, as well as metal coated glass flake, glass spheres, glass fibers, boron nitride powder or flake and mica flakes. See paragraph [0026]. The conductive coating

can be applied by spraying, brushing, rolling, dip application and flow coating. See paragraph [0027]. The sets of electrodes can be embedded in the same or separate, spaced layers of an electrically non-conductive material or applied to the same surface of an electrically non-conductive material, as long as the sets of electrodes are insulated from each other by the electrically non-conductive material. The sets of electrodes can be embedded in the outer layer of a gel coat of a fiber reinforced plastic or composite, or embedded in a polymer matrix of an outer layer of a ship, vessel or any aquatic structure. See paragraph [0028]. The electrodes are connected to a pulsed voltage source having pulses of 750 nanoseconds with a repetition rate of one pulse per second.


The prior art of Boyd's et al anticipates the applicants instant invention as set forth above. The prior art of Boyd's et al discloses both the electrically conductive and non-conductive polymer based materials and the electrically conductive particles of graphite and metal materials. The gel coat is also set forth in the document. Therefore, the prior art of Boyd's anticipates the applicants instant invention as set forth in the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
July 3, 2006


Bruce F. Bell
Primary Examiner
Art Unit 1746